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ABSTRACT

A study described the experiences of elementary educators who are attempting to implement a districtwide School-To-Work (STW) reform effort in the Milwaukee (Wisconsin) Public Schools (MPS). The descriptions were derived from the first and second years of a 3-year evaluation of MPS's STW implementation plan. Data for the study were drawn from the following sources: detailed case studies of 18 of the 44 schools directly involved in the project; surveys of 44 STW implementers, participating teachers (504 in year 1 and 553 in year 2), and 129 business and community partners; and focus groups of parents and students. The study found three factors that most influenced the successful implementation of STW: (1) a clear vision of STW; (2) a person who serves as a "point person" for STW; and (3) a purposeful selection of business and community partners. In cases where STW was successful, students were more engaged in education and test scores improved. (The report includes 18 references and 2 appendixes that provide elementary school demographics and an outline of the characteristics of a STW school.) (KC)

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SCHOOL-TO-WORK: IT'S ELEMENTARY

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Findings in this paper are part of a larger evaluation of Milwaukee Public Schools' School To Work reform initiative. The evaluation is being conducted by a team of researchers at SRI International. The current team consists of: Christine Faltz, Camille Marder, Christine Padilla, Judi Powell, Steven Robertson, Jay Scribner, and Choya Wilson, Project Director. This paper would not have been possible without the assistance of the entire SRI School To Work evaluation team.

School-to-Work: It's Elementary

In recent years, there has been a growing interest in how to better prepare students to meet the economic needs of the 21st century. As a result, various practices to incorporate work-related skills into the curriculum have been proposed. The "new vocationalism" or school-to-career approach stresses project-based learning, the integration of academic and vocational education, and the use of careers and occupational clusters as a way to organize the curriculum (Grubb, 1996). The goal of the School-to-Work Opportunities Act of 1994 (U.S. House of Representatives, 1994) is to establish school-to-work (STW) "systems" that incorporate principles of flexibility, high academic and skill standards, and wider opportunities for all students. These systems operate from the premise that many students learn better and retain more when they learn in context, rather than in the abstract, and that integrated work-based and school-based learning can be very effective in engaging student interest.

Although the pedagogy of school-to-work strategies is in line with current K-12 education reform efforts, school-to-work has been directed primarily at restructuring our nation's high schools. Accordingly, despite a growing body of research on innovative school-to-work programs (Pauly et al., 1994; OERI, 1994; Goldberger et al., 1994; Reisner et al., 1993), very little has been written about the implementation of school-to-work at the elementary level. Even the current national study of STW being carried out by Mathematica Policy Research, Inc., focuses primarily on high school programs. Yet establishing a system that engages ***all*** students in meaningful learning and that provides students with the skills needed to compete successfully for employment and become lifelong learners requires a broader understanding of how STW operates at all grade levels. Unfortunately, there appears to be a paucity of thinking on how to integrate STW into elementary schools. What constitutes effective practice and what types of support are needed to implement this type of reform?

Preliminary data gathered as part of the annual measures of progress/performance from the 27 STW implementation states and their 931 local partnerships indicate that as of June 1996 around 1 in 5 local partnerships[1] are engaged in STW at the elementary level. Engagement can range from as little as a one-time activity to more ongoing involvement. Of the 791 local partnerships that responded to the annual survey, 19% reported program linkages between elementary schools and the career exploration activities at the middle schools; 37% included elements that had influenced the elementary curriculum, such as a project-based learning activity; and 68% said they had one-time visits to elementary classrooms by outside speakers or visits by their business partners (personal communication with the Research and Evaluation Unit of the National STW Office).

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[1] Local partnerships are made up of collaborations between schools, organized labor, business, community organizations, and parents.

To assist state and local systems-building, the National School-to-Work Office, in one of its Resource Bulletins, suggests that the "model STW system creates a foundation in the early grades and continues to build until the student completes his or her studies. In the elementary grades, career awareness and developing basic skills are the major components of the student's STW education." Even at the elementary school level, the most successful STW initiatives go well beyond the traditional "career days" (National School-to-Work Learning and Information Center, 1997). In practice, however, we find that STW at the elementary level is being implemented on a smaller scale or under the guise of other names, such as "project-based learning."

The purpose of this paper is to describe the experiences of elementary educators who are attempting to implement a districtwide School To Work reform effort in the Milwaukee Public Schools (MPS). We report on several factors that have influenced the successful implementation of STW in Milwaukee's elementary schools: (1) a clear vision of STW, (2) an individual who serves as a "point person" for STW, and (3) a purposeful selection of business/ community partners. Then we describe the various forms that STW has taken in the elementary schools we are visiting.

Methods and Data Sources

The paper reports findings primarily from the first and second years of a 3-year evaluation of MPS's School To Work implementation plan. Data for the study are drawn from detailed case studies of 18 of the 44 schools directly involved in Wave 1 and Wave 2 of the implementation process based on observations, interviews of school staff and business/ community partners, and focus groups of parents and students carried out between October 1994 and May 1996. Survey data were also collected from all 44 School To Work implementors in 1996, a sample of teachers participating in School To Work schools (n=504 in Year 1 and n=553 in Year 2), and a survey of business/community partners (n=129) in 1996. The various data collection methods were employed to evaluate the institutional changes occurring at the district level, along with the changes taking place at each School To Work school. Data were collected by a team of six researchers. Findings to date have been reported annually, in August 1995 and 1996. (More detailed information on the study and our evaluation findings can be found in Wilson et al., 1995 and 1996.)

Of the 44 Wave 1 and Wave 2 schools, 26 serve elementary students (one of the 26 schools serves grades K-12). These elementary schools range in size from 248 to 933 students, and 49% to 98% of the student bodies are eligible for free or reduced-price lunch. Some of the schools draw their students from the local neighborhood; others are considered citywide schools. Most of the student body at each school is made up of students from different minority groups (see Appendix 1).

SRI staff are currently in the middle of the third year of the MPS evaluation, and we are again conducting case studies of Wave 1 and Wave 2 schools and sending surveys to STW implementors, teachers, and business/community partners. Additionally, during the 1996-97 school year, we are evaluating the implementation of STW in the context of six schools that are undergoing significant restructuring because of poor student performance.

Background on the District

For more than a decade, Milwaukee has faced the same challenges as other urban centers across the United States: a decreasing economic base to support the city, increased crime, and the exodus or withdrawal of middle-class families. These problems have had negative consequences for Milwaukee schools. Public support for MPS has diminished as a result of poor student performance. Some members of the community feel that MPS cannot be reformed and would like to dismantle public schools and institute school choice and a voucher system. At the same time, there is a strong set of forces—within the public school system, in the business community, and among community groups—committed to making the Milwaukee public schools work for all children. Former Milwaukee school superintendent Howard Fuller believed that public skepticism about MPS could be countered by a high-quality, high-skills educational program for the students who would become Milwaukee's citizens into the 21st century. Fuller was also convinced of the need to open the public schools to participation from a wider sector of the community. For Fuller, this meant bringing the business community into conversations with MPS Central Services staff and with teachers about the skills needed in the current and future workforce.

Several reforms under way in MPS converged to give STW its current look. The most influential of these are (1) the K-12 Teaching and Learning Goals, which provided a rigorous and broad-based academic framework (e.g., students will become critical thinkers, students will use technological resources capably); (2) the rethinking of vocational education in the district; and (3) MPS's participation in EQUITY 2000, which moved concerns about equity to the center of the changes taking place in the academic areas (Wilson et al., 1995).

Milwaukee's STW initiative includes much of the philosophy outlined in the School-to-Work Opportunities Act of 1994: it builds on the district's existing efforts in education reform; it suggests restructuring education so that all students can meet high academic standards and can choose to enter the workplace, college, or further training; school-based learning should incorporate career awareness and exploration; work-based learning should include work experiences that coordinate with classroom learning; there should be broad-based public-private partnerships among businesses, schools, and other stakeholders to support STW efforts; and there should be flexibility in how the STW system operates.

On the other hand, there are notable differences in the way that Milwaukee has envisioned its STW reform effort. School To Work in Milwaukee places an emphasis on both high standards and a commitment to equity for all MPS students. It also differs from many current school-to-career programs by encompassing the entire K-12 system. A major goal of STW education in Milwaukee is to provide an educational process and structure in which students apply theoretical concepts in realistic situations that reflect the complexity of real-life problem solving. To achieve this goal requires vertical (over time) alignment of educational experiences in developmentally coherent sequences relating to a skill level or workplace outcome. It also requires horizontal alignment so that students see relationships among parallel educational experiences (STW Transition Task Force, 1993). As a systemic reform effort, School To Work in Milwaukee calls not only for significant changes in what

takes place in the traditional roles between students and teachers but also for shifts in the traditional roles of the district administration, business and employers, parents and community members, and postsecondary institutions vis-à-vis the schools.

Because of the perceived urgency to make changes in the educational system, the district chose a "roll-out" strategy whereby all 155 schools within MPS would implement a STW plan within 3 years.[2] During Year 1 (the 1994-95 school year), 10 schools were purposively selected to be the first wave of schools. Another 34 schools (Wave 2) were added during Year 2, bringing the total to 44 schools during the 1995-96 school year. As Year 3 approached, it became clear that the remaining 111 schools would benefit from a planning year. Therefore, each school was required to develop an educational plan that synthesized all of the reform measures being carried out within the school into a coherent strategy.

Building a Vision of School To Work

The 26 elementary schools implementing Milwaukee's School to Work reform effort have also been guided by the 11 "Characteristics of a School to Work School" developed by the MPS central office (e.g., School to Work has themes or focus programs, School To Work links school and community).[3] Despite the framework developed by the district, MPS leadership encouraged flexibility in each school's design of STW. After 1 to 2 years of implementation, we found that the elementary schools continued to grapple with the definition and comprehensiveness of School To Work at their sites.

More than half (15 out of 26) of the elementary school STW implementors surveyed in 1995-96 indicated that School To Work included everything that went on under the aegis of the school. For some, several of the features of the curriculum or instructional activities that exist at the school—such as community-based learning, a family or team structure, and the use of performance assessments—were not considered part of School To Work. Only two features, an integrated curriculum across subjects and business/community partnerships, were uniformly identified by all 26 of the elementary schools as part of their STW design. Another feature, an integrated school-based and work-based curriculum, was also considered a part of STW by all the elementary schools (20 out of 26) in which this feature was present (Wilson et al., 1996).

Developing a vision of STW was a major step in successfully integrating STW into the elementary curriculum. Schools that demonstrated a strategic rather than an ad hoc implementation of School To Work were much more successful, regardless of the grade level of the school. A key element was a close examination of the school's mission and consensus

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[2] When MPS began its STW reform effort, the district served more than 100,000 students in 155 schools. The high school attendance rate between 1991-92 and 1993-94 averaged just 80%, the high school grade point average was 1.67, and the cumulative high school dropout rate averaged 38%. The student population was 59% African-American, 24% white, 11% Latino, 4% Asian-American, and 1% Native American, with 65% receiving free or reduced-price lunch (MPS, 1993 and 1994).

[3] See Appendix 2 for a list of these 11 characteristics.

building about the direction in which the school should move and how to integrate the various reforms and programs that already existed at the school site (e.g., Title I, focus areas, Drug Free Schools).

Once school staff have developed and identified with the vision for the school, subsequent actions serve to turn the vision into reality. In these cases, STW is an integral part of all school activities, as voiced by an elementary teacher: "At other schools, STW is viewed as an add-on, but not here—it's what you do already." The development of a clear vision enables school staff to reduce fragmentation and to build coherence into the implementation of STW through:

(1) Careful selection of partners that move a school's vision/purpose forward, rather than "grabbing" any available partners in a haphazard, unplanned manner. The ability to select partners carefully presumes that schools are free of pressure to have a partner for the sake of having a partner. It also presumes adequate assistance from the staff involved in recruitment in contacting and developing a relationship with potential partners.

(2) Thoughtful structuring of the curriculum in line with the school's focus areas or its mission. Ideally, this activity proceeds with school partners jointly developing curricula that incorporate their employer/community perspectives.

(3) Resource gathering. Whether through grant writing or other avenues, school staff find the finances and other resources needed to support the school's goals.

(4) Linkage of academics and careers.

(5) Adequate preparation of school staff in line with the school's vision and goals, including adequate time to plan together and ongoing (rather than one-time, short) staff development.

(6) Building on existing strengths rather than getting rid of everything that works for a school and trying to start from scratch. Some school staff label this process as "taking stock" of the various reforms and programs under way at the school. One outcome of this examination may be that staff vote to let go of some things that the school may have been doing for some time. We have seen that it is difficult for school staff to agree on what the strengths are and what should be eliminated (Wilson et al., 1996).

Exhibit 1 presents an example of an elementary school that has implemented its STW program in a strategic and coherent manner.

Exhibit 1

Example of Strategic and Coherent Implementation of STW

For 2 weeks during the summer of 1995, a group of **Forest Home Elementary School** teachers sat down to develop an integrated curriculum for monolingual and bilingual students to be adopted by the entire school when school opened in the fall. The goal of the Forest Home teachers was to develop a curriculum that "was formulated to help our students develop higher-order-thinking skills, problem-solving and decision-making skills, communication skills, team building, and self-esteem, with an emphasis on linking learning to the world of work." The result was a curriculum that consisted of four parts and included each grade level: (1) All About Me, (2) School: Your First Job, (3) Preparing for the Future, and (4) Reaching Beyond. Teachers believe that the new School To Work curriculum has improved the academic experiences of all their students and has even affected many of their own teaching styles. For example, although some may question how School To Work can be implemented in the early elementary grades, Forest Home's kindergartners are experiencing a curriculum that emphasizes school as their first job with major responsibilities, including attendance and promptness. Achieving high attendance was one of the goals of a competition held between kindergarten classes each week and month.

Teachers interviewed at Forest Home lauded School To Work as the vehicle for bringing teachers together and helping them to improve their teaching. Teachers reported that not only does the new curriculum incorporate the K-12 Teaching and Learning Goals and the School To Work Characteristics, but, as one teacher indicated, the School To Work philosophy has helped to meet the increasingly diverse needs of students. By having STW incorporated into lessons, students have been able to see connections between what they learn in school and their futures beyond school.

School-Level Support

School To Work requires that a number of tasks be carried out at the school site. These tasks—performed by the STW implementor in Milwaukee—include coordinating STW field trips, serving as links between schools and their partners and as links between Central Services and their schools, implementing projects, and communicating to colleagues, parents, and community members about STW. Those schools that had assigned a point person or persons with clear responsibility for these tasks experienced the most success with the STW workload. In some cases, the school's learning coordinator fulfilled this function. This arrangement helped to keep the school's STW focus on academics. In other cases, the tasks were divided among several people. This approach caused some confusion when responsibility for each task was not clearly assigned to staff.

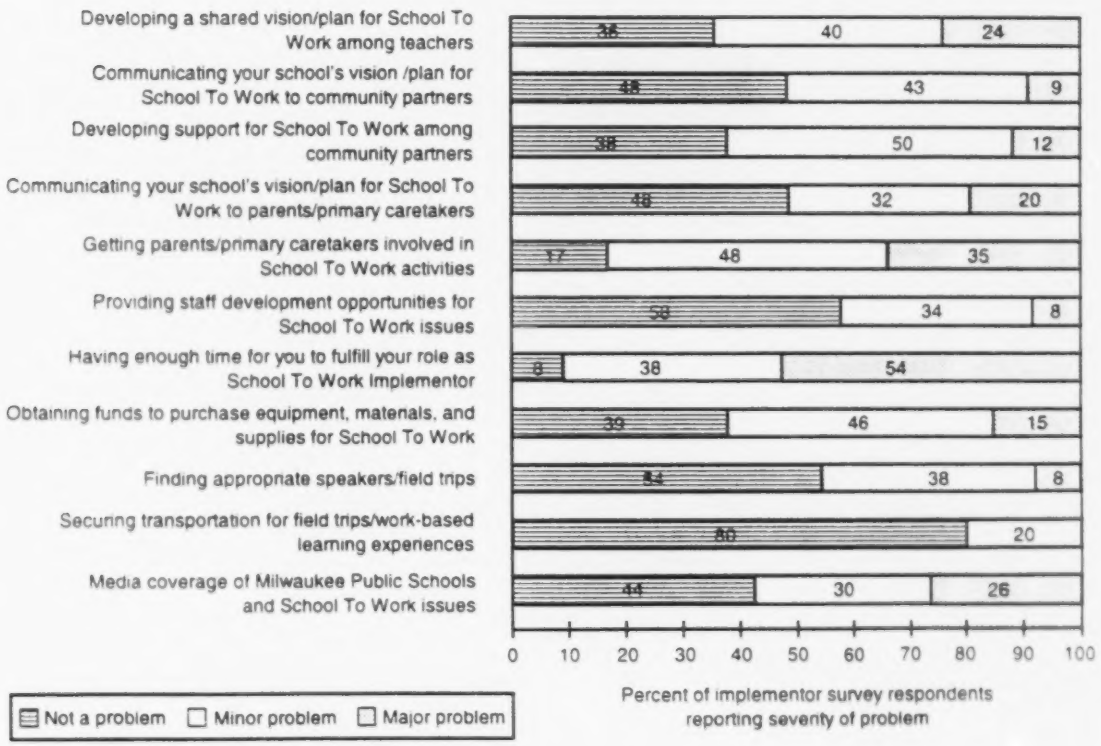
Both interview and survey data indicate that there will continue to be a need for some individual or group to serve as the point person(s) to take on the responsibilities of coordinating the myriad tasks associated with the successful implementation of School To Work. Although school staff praised their implementors, the majority of implementors

surveyed in 1995-96 reported that the position involved a tremendous workload. Some schools had more than one implementor, and the amount of time the elementary school implementor(s) spent on STW ranged widely, from as little as 10% to as much as 100% of their time. For the majority (61%), STW implementor duties consumed half their time or more. The majority of elementary school implementors (54%) also reported that having enough time to fulfill their role as the STW implementor was a major problem. Other problems faced by elementary school implementors are summarized in Exhibit 2 (Wilson et al., 1996).

Exhibit 2

Problems That STW Implementors Encountered at the Elementary Level

(n=23)



School-Level Partners

Schools with clearly defined visions of STW approached the recruitment of partners in a very active and deliberate manner, as alluded to above. Although staff in these schools still reported problems in recruiting, the quality of their current partnerships supported the strategies of having clearly defined goals before recruitment and being flexible in developing partners' roles. These schools also looked for partners "that support children's learning." Included in such partnership development are community-based organizations, as well as

businesses. Some schools have made an effort to get community-based organizations as partners to help teach students how to become members of their community (e.g., collecting food for the Salvation Army's food drive, taking students to a nursing home for inter-generational experiences).

Partners surveyed in 1995-96 reported that they liked working with these schools because of the strong leadership exhibited, the staffs' commitment to improving education for students, and the schools' willingness to work with outside organizations to define their role. In some cases, first-time encounters or early meetings did not always go well. But these schools and their partners persevered in working together to make improvements. Exhibit 3 illustrates how one elementary school has carefully selected its business/community partners.

The definition of what a STW partnership should entail was still evolving within MPS during the second year of implementation, but staff involved in recruiting business/ community partners had begun to distinguish between STW "relationships" and full-fledged STW "partnerships." During the 1996-97 school year, MPS outlined the defining characteristics of a partnership to help teachers and business/community groups to develop new partnerships. Six characteristics define a "high-level" partnership (MPS, 1996): (1) get students out of the classroom into the community/workplace; (2) bring business/community partners into the classroom; (3) link classroom learning to solving real-world problems; (4) support the academic curriculum and address MPS K-12 learning goals and graduation

Exhibit 3

Example of the Purposeful Selection of Partners

Neeskara, a Wave 2 elementary school, spent a year developing its own vision of STW. Staff began planning by reflecting on who they were and what they wanted to achieve. They identified six characteristics for success in the world of work and tied the K-12 Teaching and Learning Goals to the school's five career focus areas. STW is not viewed as another layer of reform, but rather as an umbrella that encompasses all school activities and is an integral part of the entire curriculum. STW goals have been embedded into the school's Title I plan, and the principal is leveraging Title I funds to increase teacher planning time. STW competencies are also a part of the student assistance program supported by a Drug Free Schools grant. A partner has been identified for each of the five career focus areas. Staff are being very deliberate in their selection of new partners to enhance the focus areas and are redefining relationships with previous partners. Partners are expected to provide the linkages with the real world through their participation in special projects. Participation levels vary in intensity, but all of the partners are making meaningful contributions to the instructional activities of the school. For example, Allen Bradley and Delco Manufacturing are providing technical support and resources for a hands-on engineering unit as part of the engineering and technology focus area. The companies have provided ongoing support to the school to encourage engineering as a career, particularly among minority students. Delco also sees this support as a contribution to the Milwaukee community. Company representatives believe that their partnership has been facilitated by the willing collaboration of administrators and teachers at Neeskara.

requirements; (5) require students to use critical-thinking and problem-solving skills; and (6) bring teachers and community partners together to develop goals and teach students. Since the adoption of STW, it has become increasingly clear that STW schools will need at least a few high-level partners if they are to achieve the MPS academic goals. Exhibit 4 illustrates "high-level" partnership at two of the elementary schools.

To date, there are still varying levels of partnerships within schools, including those schools that are targeting more in-depth relationships with partners. This variety reflects the consensus among groups charged with recruitment that a continuum of STW relationships should be available to those employers in the community who wish to become partners. Current partners are participating in a wide range of activities, from low intensity (such as speaking at school or providing funds) to those defined as high level (such as developing curriculum or providing job shadowing).

Exhibit 4

High-Level Partnerships

Security Bank staff are working with teachers to enhance the new curriculum at the **Wisconsin Conservatory of Lifelong Learning** (one of six innovative schools in the district and the only K-12 school in the state). Every Friday, bank staff work with fifth- and sixth-graders on developing their keyboarding and developing job readiness skills such as résumé writing, job interviewing, and good work habits. Other bank activities include the study of money via hand lenses (learning about design and dye characteristics), learning how to balance a checkbook by using a calculator, and learning about investments through role-playing activities in the stock market. Activities culminate with a tour at Security Bank, visiting each department, talking with bank employees firsthand about how the bank operates, and learning about the different jobs available at the bank. Bank representatives also serve as judges at the science fair and at a Kid Conference.

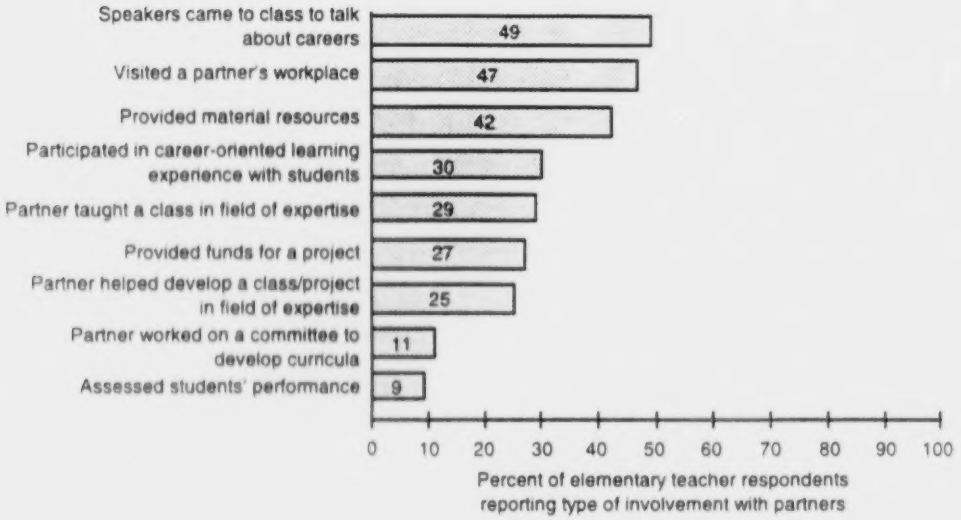
The Ko Thi Dance Company is the major partner for the arts and humanities focus area at **Neeskara Elementary School**. The company became involved as a partner to expose children to the arts, to allow students time to create, and to expose all children to African-American culture. Staff members also try to instill a work ethic in students; that it takes a lot of effort to work in this profession. In 1995-96, they taught students about dancing and drumming. In 1996-97, the company has expanded activities by having students make instruments and design costumes. They are also talking to the students about what it takes to do the various kinds of jobs within a dance company. The hands-on experience reinforces what skills are needed and opens students up to their potential. The dance company staff get a lot in return for what they give: "We always get gratification from touching the life of kids...[something] they will always remember. We always get letters from kids."

When teachers were surveyed in 1995-96 about their interactions with business/ community partners, 46% (91 out of 200) of the elementary teachers reported having any kind of interaction with their school's STW partners. Exhibit 5 summarizes the types and range of activities in which partners engaged in elementary classrooms.

Exhibit 5

Partners' Activities with Elementary Classrooms

(n=91)


Speakers came to class to talk about careers
49
Visited a partner's workplace
47
Provided material resources
42
Participated in career-oriented learning experience with students
30
Partner taught a class in field of expertise
29
Provided funds for a project
27
Partner helped develop a class/project in field of expertise
25
Partner worked on a committee to develop curricula
11
Assessed students' performance
9
0 10 20 30 40 50 60 70 80 90 100
Percent of elementary teacher respondents reporting type of involvement with partners

School To Work at the Classroom Level

The National School-to-Work Office's Resource Bulletin on STW at the elementary level states that career awareness activities should be designed (1) to make students aware of the broad range of careers and/or occupations in the world of work, including options that may not be traditional for their gender, race, or ethnicity; and (2) to create an environment where students see connections between school and the real world. Skill building should incorporate not only the basic academic skills but also thinking skills and personal qualities that will be applicable for success in the workplace (National STW Learning and Information Center, 1997).

The Resource Bulletin also suggests that building connections between academic skills and real-world situations helps students to understand how their school learning experience is connected to their future educational and occupational choices. Contextual learning is supported by cognitive research, which clearly advocates situation-specific learning vs. theoretical learning, learning engaged with objects vs. learning dependent on symbols, and social vs. individual learning (Resnick, 1987). Ensuring that lessons have some relationship to the real world, such as using real-life problems vs. abstract examples, is something that

many elementary teachers have been doing for years. Several of the elementary teachers we interviewed in Milwaukee stated that their instruction had not changed radically as a result of STW for just this reason.

Yet many elementary teachers were initially concerned as to how they would implement STW in their schools. To ease concerns, principals and STW implementors often had to reassure teachers that they were already doing STW: "Everything you teach is somehow related to careers or life outside of school; it's the teacher's role to make those connections explicit for children." This message was most often heard in schools that had developed a strong STW vision, but teachers at the other elementary schools also saw value in implementing STW:

> "My impression is that STW is just education for life, which we should have been doing forever. I think of STW as a ship that has joined my ship. I think of this as another component of good education."
>
> "My view of what I could be, having grown up in a small, rural community, was narrow. If I had [had] someone to sit down with me and point out the 17 things I could do..." [it would have been of great value in developing his future plans].
>
> "STW in this school is immersed in how you learn. ... STW has forced us to think about labeling. STW has reaffirmed some things that open education has always embraced—thematic units, community experiences."

What has changed in many of the elementary classrooms is that teachers are now engaging in a greater number of long-range projects, with more higher-order skills embedded in these projects. Teachers reported that they are teaming more often than they did before School To Work. They also felt that they were putting more of an emphasis on making connections with different career options and bringing more of the outside community into their lessons (e.g., bringing into the classroom community members with jobs that use the skills students are learning, and visiting a job or community site). According to one second-grade teacher: "STW shows students why it is important to learn math, social studies, etc. It gives you the background to make appropriate choices later in life. In every unit we teach, we think of what careers are related to it."

Elementary school teachers in Milwaukee are taking a variety of approaches in linking academic skills with real-world experiences and in making their students aware of careers in the world of work. Learning-in-context often takes the form of project-based learning that includes classroom academic projects (e.g., writing and printing students' own books, developing an environmental research project), community service projects (e.g., collecting food for the hungry, cleaning up a playground), schoolwide themes/focus areas with a broad industry theme (e.g., human services, engineering, the arts, technology, entrepreneurship), and after-school and lunch-time programs (e.g., Junior Achievement activities, an engineering club). Any one of these may involve business/community partners or other members of the community. Career awareness is also built into these projects, along with

activities such as career fairs, visits from individuals to talk about their jobs, and adult mentors from business/community partners.[4]

Neeskara Elementary School. Neeskara is an example of a school that has emphasized project-based learning, including some school-based enterprise. The principal and the STW implementor at Neeskara believe strongly that STW must be an integral part of the entire curriculum in order for it to be well implemented. They also believe that the best way to learn is by making connections between what students learn in school and the real world. Before becoming a STW school, Neeskara staff had already implemented schoolwide themes and programs, student-run businesses, on-site and off-site field experiences involving students in the various arts, and business partnerships. With their participation in STW, staff revisited their instructional practices and decided to build on what was working and to formalize the five career focus areas that they had identified: communication, health and human services, arts and humanities, engineering and technology, and entrepreneurship.

Teachers at Neeskara believe that STW has been an integral part of their instruction for years, but they are building more career exploration into classroom activities, as well as "real-world" experiences. For example, as part of the third-grade social studies unit on the City of Milwaukee, teachers are asking their class to develop a model city that will require students to think about the range of services involved in running a city and the associated jobs. One of the third-grade teachers commented: "I've always done a city unit, but not to this extent." In preparation for the district's performance-based assessment on communication, the fifth-grade teachers decided to ask their students to select an occupation to explore and report on. Each presentation is videotaped, and these career choices are revisited at the end of the year to see whether students' ideas have changed.

All teachers appear to be experimenting with entrepreneurship to different degrees. The Advertising Club, a lunch-time activity group, is working with Marshall High School graphic arts students to produce paper products. Some classrooms are producing products to sell during special holidays or at the school's STW Showcase. The products that students produce may involve the whole class or may be designed by smaller groups of students. For example, two second-grade girls (one African-American and one Hmong) invented a makeup kit for dolls after reading about an African-American woman entrepreneur who had made a million dollars by selling makeup. This year, several of the teachers will be using Junior Achievement activities to support grade-level themes.

As described earlier, a major partner has been identified for each of the five career focus areas. Teachers believe that business and community involvement is important because it provides students with a different perspective (hearing similar information from someone other than their teacher reinforces what they are learning). School partners have worked with a variety of students on different types of work-based activities. The third-graders, for example, are working with one of the business partners (a large printing company) to make

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[4] A detailed description of a multi-year project operated by fourth- and fifth-graders in California can be found in Rogers (1996).

paper to publish their own books, which have been donated to the library. The students have also toured the work site and had employees make presentations to the class.

Trowbride Elementary School. Among the after-school activities offered at Trowbridge is a club that began as a result of a partnership with the Milwaukee School of Engineering (MSOE). Girls Experimenting with Math and Science (GEMS) is sponsored by the MSOE chapter of the Society of Women Engineers. The club provides young girls with the opportunity to meet professional women with careers in various areas of engineering. Together, students and engineers engage in experiments that students complete either at school or at home.

To help their elementary students become aware of the world of work, some MPS schools set up schoolwide programs or classrooms that model the "real world." In the simulated settings, a student may have a job to perform (for which he or she earns a paycheck), or students establish a school-based enterprise. In other districts, simulations have taken the form of micro-societies[5] that mirror a community setting (e.g., fourth- and fifth-graders have jobs in the society, third-graders shadow workers, and first- and second-graders are consumers).

Silver Spring Elementary School. STW at Silver Spring is synonymous with the Entrepreneurial Immersion Program, which has received international attention. Silver Spring has been involved in this program since 1991 as part of the principal's effort to create awareness and understanding among students of the importance of education and its direct relevance to future employment opportunities. Currently, the program consists of three components: (1) classroom enterprises, (2) in-school student employment, and (3) business and community partnerships. When the program first started, it included only the classroom enterprises, and teachers struggled with how to make them work. Staff did not make major changes when they became a STW school, primarily adding or refining activities (e.g., expanding partners and speakers to include more minority role models, increasing teacher planning time). Generally, teachers view STW as exposing students to careers, giving them hands-on experience, and helping them develop life skills by working with others and taking care of the neighborhood.

Every classroom operates an enterprise (commonly referred to as a "business") that sells a product or service to the student body.[6] Some enterprises sell during afternoon recess or at other times during the day. All enterprises sell at the two Trade Fairs that are held each year. The stated guidelines of the enterprises are to (1) establish the connection between school and work, (2) prepare students to function within the business and economic system, and (3)

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[5] Several examples of these micro-societies can be found in Kentucky school districts, such as Jefferson County and Rockcastle Public Schools. Kentucky received one of eight first-round state STW implementation grants awarded in 1994. The state's STW plan is closely linked to state education reform efforts.

[6] In 1996-97, not all classrooms had an enterprise because of the influx of new teachers. Some of these teachers do not have the time or adequate training to start a business. Staff turnover presents significant challenges to the momentum of schools trying to implement STW.

increase academic performance. Both regular and special education students are involved in school-based enterprises. Classroom enterprises can change from year to year, and each business has a liaison from the community who talks to students about topics related to their classroom business. Classroom enterprise activities are tied to the curriculum as they relate directly to subject areas (such as math and science) and as they tie into the five schoolwide, month-long integrated themes (e.g., Black History, the environment). Examples of two classroom enterprises are described below.

- Silver Spring Sodas is a business that is still run by the fourth-sixth-grade learning disabled class. Students supply sodas for the faculty vending machine and sell sodas at events like the Trade Fairs and the school carnival. Students' responsibilities include placing orders for the sodas, calling the supplier when there are complaints, filling the soda machine, and counting the money (the business officers of the company decide how to spend the money). The teacher sets aside about a half hour each week for a soda meeting. Combined with the other business-related activities, about 1-1/2 hours are spent on the classroom businesses each week. Business activities are tied into the curriculum every day through math and written-language instruction. According to the teacher, one of the most important benefits for students is that they learn how to behave professionally and learn about customer relations (skills that are difficult to teach).

- Recyclers is a business run by one of the third-grade classrooms. Students collect paper from the classrooms and offices in the school and put it in a recycling bin on the school grounds to be picked up. They also collect cans that they turn in for cash. Collection activities occur daily during recess (about 20 minutes). Students also make holiday cards from recycled paper and sell them during the weeks of the Trade Fairs. The class spends about 45 minutes a day preparing for these sales (e.g., learning about making change and being courteous). The business has two accountants, who count the money. All students decide how to spend their earnings, which have been spent on field trips and equipment (i.e., a microscope). Twice a year, the class does month-long themes related to recycling that tie in with the academic subjects At other times of the school year, various lessons fit in with recycling.

The in-school employment program gives students direct experience with the employment process as they perform needed jobs around the school (e.g., safety patrol, teacher's aide). Students complete an application form, receive training on the interview process, and then are interviewed for the jobs.

Silver Spring has numerous partnerships with businesses and community organizations. Partners serve a range of functions, which include providing a person to serve as classroom liaison in each classroom sharing business expertise and assisting teachers, providing volunteers for the school's tutoring program, participating in the school's Career Week, providing resources for activities such as field trips and inservices, and serving as sites for field trips. Partnerships are expected to "help infuse math, science, business and technology into the school's curriculum."

Trowbridge Elementary School. Kids' Biz at Trowbridge is a focal activity for every classroom in the school. Each classroom has the opportunity to learn about manufacturing and profit margins as children research, design, produce, market, and evaluate a "product." Items produced have included bookmarks, key rings, notepads, pencil holders, memo and napkin holders, pins, tie-dyed tees, sand candles, herb pots, holiday ornaments, and wreaths. Some of these crafts were donated to the Ronald McDonald House; others were sold at the Kids' Biz sale. Fifth-grade students kept computer journals about their products: how they were made, what sold, and plans for the profits. The Trowbridge Yellow Pages were originally created through Kids' Biz as an attempt to involve small businesses in the area. The school offered free advertisements when business representatives volunteered to be speakers, science fair judges, etc. All students, including special education students, are included in Kids' Biz. One of the special education teachers stated that STW is very valuable for her students: "Kids' Biz is personal for kids; its right there, hands-on, not just 'when they grow up.'"

More Than Just Numbers is an accounting careers program developed by the Wisconsin Institute of Certified Public Accounts that is targeted toward fifth-graders. Five of the Wave 1 and 2 elementary schools have students involved in this program The More Than Just Numbers program introduces students to the field of accounting through a 2-hour visit to a CPA firm. The students are introduced to a case study and given informational tools to meet the challenge it proposes. While at the firm, students are exposed to some of the tools of the trade: fax machines, computers, and calculators. After their visit, they return to the classroom and, over the course of several weeks, gather information and work on a "business plan" for their "client," played by CPAs from the firm they visited. The CPAs come to the classroom for the presentation.

Work Readiness Skills

Developing the work readiness skills required for any job can also be addressed at the elementary grades. The most widely quoted list of these essential skills are the SCANS foundation skills and competencies (Secretary's Commission on Achieving Necessary Skills, 1991). The foundation skills include (1) basic skills of reading, writing, mathematics, speaking, and listening; (2) thinking skills such as thinking creatively, decision-making, problem solving, reasoning, and knowing how to learn; and (3) personal qualities like individual responsibility, self-esteem, integrity, sociability, and self-management. The Commission also suggested five competencies that a student should leave school with: the ability to productively use resources, interpersonal skills, information, technology, and systems.

Included in the mastery of academic skills in MPS' vision of restructuring school experiences is the teaching of proficiencies such as critical and creative thinking, problem posing and solving, working cooperatively, interpersonal skills development, and using multiple intelligences (STW Transition Task Force, 1993). Assessment of these skills is based on performance. Many elementary teachers in Milwaukee, and elsewhere in the nation, already integrate these foundation skills with the core subject areas through instructional practices, such as homogeneous grouping, in which students learn how to work with others

and to problem solve. Additionally, some teachers are addressing these work readiness skills by making explicit connections between the work or community setting and school.

Neeskara Elementary School. As part of their STW efforts, staff at Neeskara decided to promote six characteristics of being a good worker: good attendance, perseverance, responsibility, being cooperative, being good problem solvers, and having a positive attitude. One of the teachers stated: "We feel very strongly as an elementary school we wanted to promote the affective characteristics kids will need throughout their life." Teachers are supportive of teaching students skills they will need on the job, such as how to respect others and to be on time: "I want them [students] to realize how to be ready to get and keep a job," stated one of the third-grade teachers. The staff undertook a campaign to publicize their STW initiative by placing in each classroom STW posters that displayed the six characteristics of being a good worker, and STW T-shirts are awarded every grading period at an awards program to students who demonstrate the six characteristics. Students get a chance to practice many of these skills through the increased use of project-based activities that include cooperative learning. When asked whether they like working with other students, students responded that it made work faster and they got more ideas. At times, group work was more difficult "because sometimes everybody wants an idea and they can't decide."

Trowbridge Elementary School. A first-grade teacher at Trowbridge runs her classroom like a job site. The children understand that school is their job right now. They punch in every morning, and they earn their lunch breaks. This teacher integrates STW into everything that students do. Her philosophy is that every topic taught can be related to some aspect of careers or life, and it is the responsibility of the teacher to make that connection for children.

Wisconsin Conservatory of Lifelong Learning. Teachers at the Conservatory make an effort to tie the "word of the day" into careers. Teachers are amazed at how effectively students are learning and using the words. During a field trip to the museum, walking through the Old Town Milwaukee exhibit, one of the second-graders said: "Look, there is a candelabra!" Her teacher reported, "I just about had a heart attack." Other teachers also heard students using the words on field trips—on a bus trip, students pointed out a *barricade*; at the zoo, they pointed out *nocturnal* animals; they asked for their pie *a la mode* at McDonald's.

Change in Practices

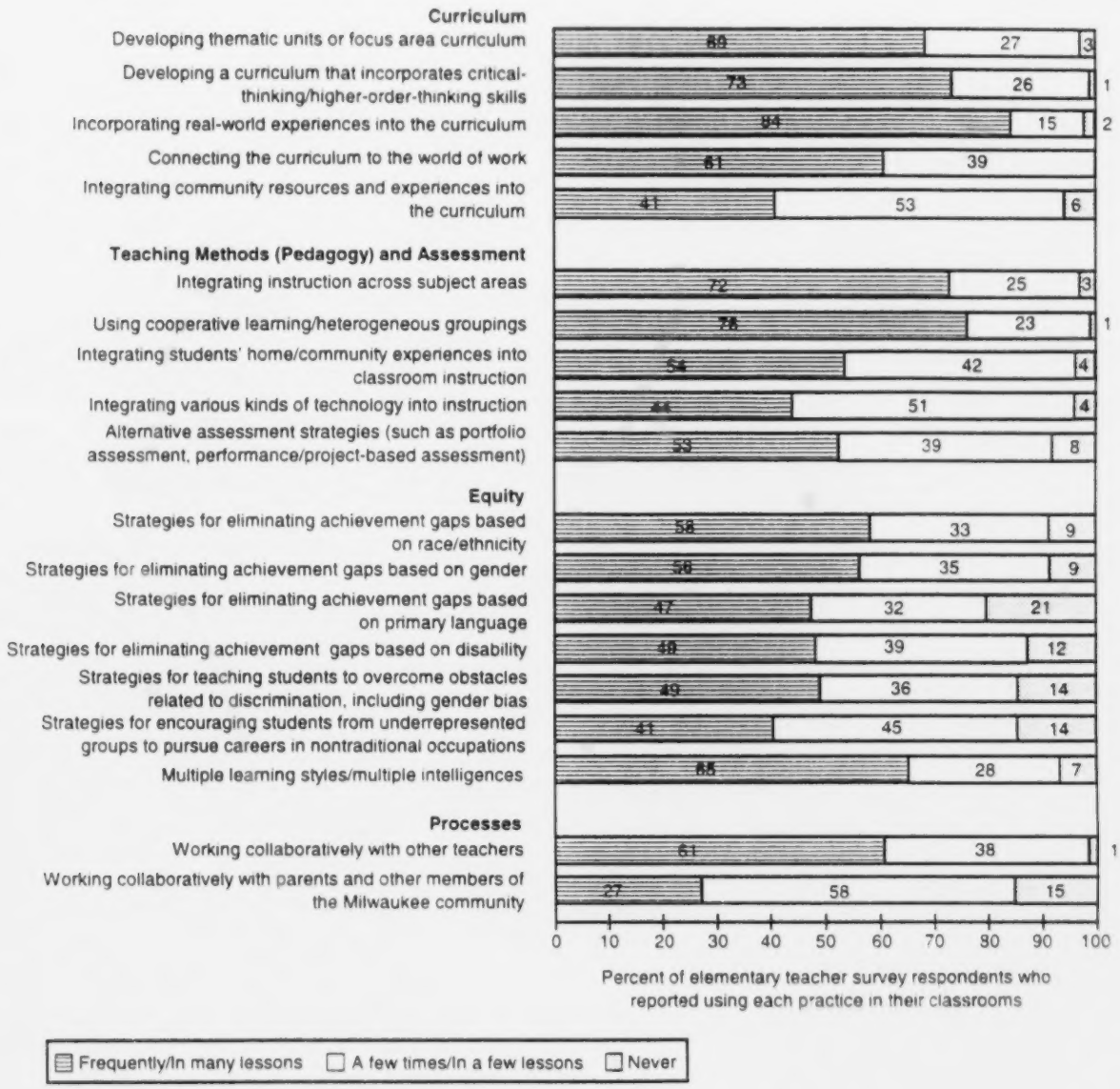
MPS's vision of STW assumed the adoption of certain practices to enhance student learning. These practices involved changes in the curriculum, changes in pedagogy and assessment, attention to equity, and changes in the way individuals worked together. In 1995-96, we surveyed teachers about how frequently they implemented various practices in their classrooms after 1 or 2 years of STW implementation. Exhibit 6 summarizes these data for elementary teachers.

Almost all teachers reported having used every practice in their classrooms at least a few times during the year, but use of a particular practice only a few times may not be enough to

Exhibit 6

Frequency of Classroom Use of STW-Related Practices, as Reported by Teachers Involved in STW

(n=209)



benefit students. The vast majority of teachers reported frequent incorporation of real-world experiences into the curriculum (84%) and developing a curriculum that incorporates critical-thinking/higher-order-thinking skills (73%). Similarly, regarding pedagogy and assessment, somewhat more teachers reported frequent use of cooperative learning and heterogeneous groupings (76%) and integrating instruction across subject areas (72%) than other practices.

In addition, although 61% of teachers indicated that they frequently connected the curriculum to the world of work, only 41% of elementary teachers reported frequently incorporating community resources and experiences into the curriculum, and 54% reported integrating students' home/community experiences into classroom instruction.

Despite their familiarity with project-based learning and integrated instruction, the notion of STW is not always accepted by elementary school staff. Some elementary teachers express concerns about the need to develop strong academic skills in the early grades and the need to make project-based activities developmentally appropriate. A few teachers also expressed concerns about the motives and ability of some business partners to interact with students and the efficacy of teaching students to "make money off of" their fellow students.

Community- or Work-Based Experiences

As discussed above, work-based learning at the elementary level tends to focus on career exploration and experiences in the community. During the 1995-96 school year, elementary MPS students spent very little time engaged in community- or work-based experiences. In the elementary schools, the majority of students (63%) spent, on average, 1 hour or less per week engaged in these types of experiences (19% of students spent no time, and 19% spent 2 to 4 hours per week).

Impact on Students

Ultimately, what matters is STW's impact on students. As yet, the data are insufficient to evaluate STW students' progress on standardized tests. On the other hand, teachers and students alike have provided us with anecdotal evidence of academic and other progress in STW. For example, the principal at one of the elementary schools credited the high attendance rate at her school in part to students' interest in the changes in instruction that have come about as a result of STW. STW has made school more fun and interactive. Teachers also acknowledged changes in their instructional approach. A third-grade teacher described how her more traditional methods of instruction were losing their effectiveness with students. She has found that by integrating STW into her reading lessons (i.e., making students see a connection between the need to read and their future), she has "hooked" more and more of her students on reading and writing. She impresses on her students such things as the fact that job requirements nowadays change rapidly and require people who can learn, and that they will have to be able to read job descriptions. In her words, she "focuses on the practical" aspects of reading. As a result, this teacher has seen improvement in reading scores, especially with her lower achievers. Teachers also report that they see the results of STW in the increased self-esteem of children: "We don't measure that; it's there, and we'll see a lot more of it in the future."

What we have learned is that making connections between school-based learning and "real-life" experiences does not come naturally for all teachers. Simply placing a student in a "real-world" context does not guarantee a learning experience. Teachers who do not have a clear vision of School To Work have a hard time making explicit connections between what they teach and work-based learning. Teachers who are just "going through the motions"

because they feel they have to do what everyone else is doing (e.g., operating a classroom business without really getting the students involved and making ties to the academic curriculum) do not achieve success. Teachers who can connect activities to the larger School To Work picture or to meaningful integrated units have students who can articulate the purpose and benefits of School To Work, even at a young age. Two first-graders at Trowbridge Elementary provided us with their understanding of STW:

> "We're working on what we want to be when we grow up. School To Work is good. It teaches us how we are going to grow up and how to make money ... and how to behave and follow the rules. You have to follow the rules even when you grow up."

At Neeskara, where they have been stressing the six characteristics that make a good worker, students articulated responses that reflected this message when asked what STW meant to them:

> "It [STW] means stay in school and learn. So you'll grow up and you'll be smart and you can go to college."

> "Make sure your work is good in school and you'll be prepared for the future."

When asked what skills they thought would be important to have once they left school, some elementary students were quite insightful and practical:

> "I'm going to a different middle school. I'm going to try and get into Steuben for after-school and weekend activities. Because Steuben they're chosen for their computer skills and computer is the technology for today. And I'm going to go there to learn better. Just in case I can't be a basketball player, I could know computers."

> "If you need a job, you need to know all your skills and reading and writing. If you have like bad grades, you might not get that job."

> "I think you need math and science and English the most, and social studies. Because you got to know your history. And you got to know, like, if you go to the store and buy something, you need to know how to count up and see how much change [you get]. Because they might be trying to cheat you."

Overall, the students that we interviewed view STW in a positive light. Improvements in MPS's database and information system will enable the collection of data on students' academic progress in STW in Year 3.

Conclusion

Helping students to see a connection between what they are learning in school and what is important in the real world has value at all grade levels. Learning-in-context is not a new concept—it was first proposed by John Dewey—but it has gained more support in the last 15

years as cognitive research and research on school reform have demonstrated that active learning is much more effective than traditional practices in teaching thinking skills (the skills most required in high-performance workplaces). Indeed, contextual learning is a critical aspect of the STW philosophy (see, for example, Weinbaum and Rogers, 1995), but engaging students in the learning process must start early—much sooner than high school—since many students have already dropped out, both mentally and physically, from the educational process before they ever reach high school.

Changing the education environment to effectively provide academic and community- or work-based learning for all students is a challenge at all levels of K-12 education, but one that is being met more successfully at the elementary school level, where there are fewer institutional barriers to overcome. We found that "scaling up" appeared to be less of a problem at elementary schools than at other grade levels, but several factors can play a key role in facilitating implementation: (1) a clear vision of STW, (2) an individual who serves as a "point person" for STW, and (3) a purposeful selection of business/community partners. Instruction at the elementary level in Milwaukee is not radically different from what it was before STW, but teachers are taking extra steps in connecting academics with real-world experiences.

If misunderstandings about STW are to be overcome (e.g., thinking of it as an enhanced vocational education program for high school students or as an apprenticeship program for a small number of students), more attention needs to be given to STW at all grade levels, not just at the school-to-work transition period.[7] Building STW "systems" requires a better understanding of how STW operates in the elementary school setting and the advantages that can be derived by even very young children. Several of the elementary principals interviewed in Milwaukee felt that they could benefit from what other elementary schools have learned, but they have found few sources of information at national conferences or as part of the national research agenda. These educators are looking for more than just a few examples; but rather, they need guidance on how instructional practices can be restructured to set in place STW across the K-12 curriculum.

In their 1996 Report to Congress, the Departments of Education and Labor recognized this need and reiterated that a key element of a STW system is the presence of STW components on a continuum throughout the school curriculum (U.S. Departments of Education and Labor, 1996). To help support the development of STW at all grade levels, STW Opportunities Mentor/Peer Technical Assistance Project grants are being awarded. One recipient is the Rochester City School District, who will be providing technical assistance on how to apply the major components of STW at the elementary through high

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[7] School-to-work as a K-12 reform effort also challenges the criteria or benchmarks for assessing progress on implementing school-to-work programs that are currently being developed. The state of Wisconsin, for example, has identified nine benchmarks for the state's STW program, eight of which focus largely on grades 9-12 (the target grades for the program). Wisconsin's vision for a statewide STW system is grounded in a number of well-established high school programs, such as youth apprenticeship and tech-prep, that are closely linked to other education reform efforts.

school levels. Activities such as these may begin to provide elementary educators with some of the answers they have been looking for.

References

Goldberger, S., Kazis, R., and O'Flanagan, M. K. (1994). *Learning Through Work: Designing and Implementing Quality Worksite Learning for High School Students.* New York: Manpower Demonstration Research Corporation.

Grubb, W. Norton. (1996). The New Vocationalism: What It Is, What It Could Be. *Phi Delta Kappan*, 77(8), pp. 535-546.

MPS (Milwaukee Public Schools). (November 1, 1994). "Characteristics of School To Work in the Milwaukee Public Schools." Milwaukee, WI: Author.

MPS (Milwaukee Public Schools). (1993). *MPS 1992-93 Report Card.* Milwaukee, WI: MPS Division of Research and Assessment.

MPS (Milwaukee Public Schools). (November 1994). *MPS 1993-94 Report Card.* Milwaukee, WI: MPS Division of Research and Assessment.

MPS (Milwaukee Public Schools). (1996). "School To Work Business/Community Partnerships: Definitions." Milwaukee, WI: Author.

The National School-To-Work Learning and Information Center. (January 1997). *Resource Bulletin: School-to-Work in Elementary Schools.* Washington, DC: Author. (Internet: http://www.stw.ed.gov)

Office of Educational Research and Improvement. (June 1994). *School-to-Work: What Does Research Say About It?* Washington, DC: U.S. Office of Education.

Pauly, E., Kopp, H., and Haimson, J. (January 1994). *Home-Grown Lessons: Innovative Programs Linking Work and High School.* New York, NY: Manpower Demonstration Research Corporation.

Reisner, E. R., McNeil, P. W., Adelman, N. E., Kulick, C. D., Hallock, R. V., and Leighton, M. S. (December 1993). *Using Youth Apprenticeship to Improve the Transition to Work: An Evaluation of System Development in Eight States.* Washington, DC: Council of Chief State School Officers.

Resnick, L .B. (1987). "Presidential Address: Learning in School and Out." *Educational Researcher.*

Rogers, Laurette. (1996). The California Freshwater Shrimp Project. Berkeley, CA: Heyday Books.

Secretary's Commission on Achieving Necessary Skills (SCANS). (1991). *What Work Requires of Schools: SCANS Report for AMERICA 2000.* Washington, DC: U.S. Department of Labor.

U.S. Departments of Education and Labor. (September 1996). *Report to Congress: Implementation of the School-to-Work Opportunities Act of 1994.* Washington, DC: U.S. Government Printing Office.

U.S. House of Representatives. (May 4, 1994). *School-to-Work Opportunities Act of 1994 (P.L. 103-239).* Washington, DC: Author.

Weinbaum, A., and Rogers, A. M. (1995). *Contextual Learning: A Critical Aspect of School-to-Work Transition Programs.* Washington, DC: Academy for Educational Development.

Wilson, C. L., Powell, J., Kelley, F., Faltz, C. J., Shields, P. M., Marder, C., and Padilla, C. (August 1995). *Evaluation of Milwaukee's School to Work Implementation Plan: Phase 1 Final Report.* Menlo Park, CA: SRI International.

Wilson, C. L., Padilla, C., Marder, C., Shields, P. M., Faltz, C. J., and Scribner, J. P. (August 1996). *Evaluation of Milwaukee's School to Work Implementation Plan: Phase 2 Final Report.* Menlo Park, CA: SRI International.

Appendix 1: Wave 1 and 2 1995-96 Elementary School Demographics

WAVE 1 AND 2 1995-96 ELEMENTARY SCHOOL DEMOGRAPHICS

School Name	Grade Levels	Neighborhood vs. Citywide	Number of Students	Ethnic Makeup of Students*	% Free and Reduced Lunch	Number of Teachers+
Clarke	preK-5	Neighborhood	522	100% Af. Amer.	98%	34
Emerson	PreK-5	Neighborhood	284	35% White 57% Af. Amer. 2% Hispanic 2% Asian 1% N. Amer. 2% Other	74%	19
Forest Home	PreK-6	Neighborhood	933	20% White 13% Af. Amer. 62% Hispanic 2% Asian 2% N. Amer. 1% other	92%	51
Gaenslen	PreK-8	Neighborhood	707	17% white 64% Af. Amer. 16% Hispanic 1% Asian 0.3% N. Amer. 2% Other	83%	50
Garfield	PreK-5	Neighborhood	431	9% White 70% Af. Amer. 2% Hispanic 15% Asian 0.2% N. Amer. 3% Other	78%	25
Hawley Road	PreK-5	Neighborhood	344	29% White 57% black 9% Hispanic 3% Asian 1% N. Amer. 2% Other	76%	23
Hawthorne	PreK-6	Neighborhood	364	13% White 84% Af. Amer. 1% Hispanic 0.3% Asian 1% N. Amer. 1% Other	75%	24

* Percentages may not equal 100 because of rounding.
+ October 1996 data.

WAVE 1 AND 2 1995-96 ELEMENTARY SCHOOL DEMOGRAPHICS

School Name	Grade Levels	Neighborhood vs. Citywide	Number of Students	Ethnic Makeup of Students*	% Free and Reduced Lunch	Number of Teachers
Honey Creek	PreK-5	Neighborhood	359	49% White 36% Af. Amer. 8% Hispanic 3% Asian 2% N. Amer. 2% Other	61%	19
Hopkins	PreK-5	Neighborhood	746	0.1% White 99% Af. Amer. 0.1% Hispanic	93%	40
Kagel	K-5	Neighborhood	349	8% White 7% Af. Amer. 75% Hispanic 8% Asian 1% N. Amer. 0.3% Other	94%	23
Lloyd	PreK-5	Neighborhood	573	14% White 76% Af. Amer. 3% Hispanic 4% Asian 0.2% N. Amer. 2% Other	73%	33
Manitoba	PreK-6	Neighborhood	365	61% White 25% Af. Amer. 8% Hispanic 4% Asian 1% Other	49%	29
Maryland Avenue	PreK-8	Neighborhood	324	20% White 66% Af. Amer. 3% Hispanic 3% Asian 1% N. Amer. 3% Other	83%	23
Morgandale	PreK-6	Neighborhood	633	34% White 13% Af. Amer. 48% Hispanic 1% Asian 1% N. Amer. 2% Other	58%	31

WAVE 1 AND 2 1995-96 ELEMENTARY SCHOOL DEMOGRAPHICS

School Name	Grade Levels	Neighborhood vs. Citywide	Number of Students	Ethnic Makeup of Students*	% Free and Reduced Lunch	Number of Teachers
Neeskara	PreK-5	Neighborhood	431	26% White 56% Af. Amer. 6% Hispanic 10% Asian 0.5% N. Amer. 2% Other	81%	28
River Trail	PreK-5	Neighborhood	387	32% White 59% Af. Amer. 3% Hispanic 2% Asian 2% N. Amer. 2% Other	66%	23
78th Street	PreK-5	Neighborhood	534	37% White 31% Af. Amer. 3% Hispanic 26% Asian 1% N. Amer. 2% Other	64%	34
Silver Spring	PreK-6	Neighborhood	370	5% White 89% Af. Amer. 1% Hispanic 1% Asian 4% Other	83%	22
Starms Discovery	1-5	Citywide	326	5% White 84% Af. Amer. 6% Hispanic 1% Asian 0.3% N. Amer. 2% Other	89%	40
38th Street	K-5	Citywide	558	13% White 70% Af. Amer. 1% Hispanic 15% Asian 0.2% N. Amer. 2% Other	81%	30
Thoreau	PreK-6	Neighborhood	725	23% White 72% Af. Amer. 2% Hispanic 0.3% Asian 1% N. Amer. 2% Other	76%	38

WAVE 1 AND 2 1995-96 ELEMENTARY SCHOOL DEMOGRAPHICS

School Name	Grade Levels	Neighborhood vs. Citywide	Number of Students	Ethnic Makeup of Students*	% Free and Reduced Lunch	Number of Teachers
Tippecanoe	K-5	Neighborhood	248	46% White 46% Af. Amer. 4% Hispanic 2% Asian 1% N. Amer. 1% Other	62%	16
Trow-bridge	PreK-5	Neighborhood	310	42% White 49% Af. Amer. 6% Hispanic 1% Asian 2% N. Amer. 1% Other	77%	26
Victory	PreK-5	Neighborhood	474	42% White 41% Af. Amer. 11% Hispanic 3% Asian 2% N. Amer. 1% Other	70%	30
Wisconsin Conserva-tory of Lifelong Learning	K-12	Citywide	418	39% White 45% Af. Amer. 9% Hispanic 2% Asian 1% N. Amer. 4% Other	71%	27

Appendix 2: Characteristics of a STW in Milwaukee

CHARACTERISTICS OF SCHOOL-TO-WORK IN THE MILWAUKEE PUBLIC SCHOOLS
November 1, 1994

I. CHARACTERISTICS OF A STW SCHOOL

1. The K-12 goals are the basis for STW. The school-to-work process is how MPS will fully implement its K-12 teaching and learning goals. In STW schools, all staff understand STW and how STW contributes to meeting the K-12 principles and goals.

2. STW is rigorous. STW enables all students to successfully complete established performance requirements and meet high standards. This means:

   a. all children learn critical thinking skills and master higher order concepts;

   b. the key to students' academic progress is acceleration rather than remediation;

   c. the belief that all children can achieve academic excellence permeates attitudes and behaviors in a STW school; and

   d. all students are prepared for a post-secondary education.

3. STW means equity. This means:

   a. making significant progress toward eliminating gender, ethnic and racial achievement gaps,

   b. no tracking on the basis of higher or lower achievement levels,

   c. Students in "families," focus areas, and classes are representative of the entire school, including different achievement levels, and exceptional education and special language populations, and

   d. Within classes teachers use flexible, heterogenous groupings.

4. STW is comprehensive. All students and teachers in a school are involved within STW in three years. At least 25 percent are involved in the first year.

5. STW links school and community. All students are engaged in community/work-based experiences that impact on student learning and connect students to the community and the world of work; this means:

   a. Students solve real-life problems,

   b. Students spend substantial time learning in the community,

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c. Students are involved in on-going relationships with community/business partners,

d. Students learn higher order thinking and skills through community/business relationships, and

e. Community/business partners assist in teaching children in the classroom, the workplace, and the community.

6. STW means integrated studies. Students spend at least 25 percent of their time engaged in projects or activities which:

a. cross multiple subject areas,

b. directly connect academic skills and work,

c. lead to complex learning and problem solving, and

d. involve inquiry as the basis of teaching and learning (the student is an explorer, the teacher is a guide; students pose questions and solve problems; teaching is not telling, learning is not answering; students work effectively in groups to solve problems).

7. STW has themes or focus programs. STW schools have themes or focus programs around which the integrated curriculum and community-business partnerships are organized.

8. STW means teams or "families." In STW students and teachers collaborate in families or teams over a period of time for the purposes of:

a. advancing the integration of learning,

b. fostering collaboration and teamwork that reflects the world of work, and

c. enhancing the strength of the educational relationship between teachers and students.

9. STW means all students are prepared for post-secondary education. This means: This means:

a. At each level (elementary, middle and high school), STW schools prepare students for high achievement at the next level,

b. STW schools help students learn about the need for life-long learning,

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c. STW schools enable students to meet high academic standards in all areas so all students graduate with wide range of options, and

d. STW schools help students learn about careers and about the link between careers and post-secondary education.

10. STW involves parents. STW requires that parents are meaningfully involved in the ongoing implementation of STW and kept well informed about the school's STW goals, activities and results.
This means:

a. parents are members of STW schools' action teams,

b. STW schools identify meaningful roles for parents in day-to-day school operations and encourage parents to participate in those roles,

c. parents as employers and employees are recruited to help students explore careers, and

d. all parents regularly receive information about STW in their schools.

11. In STW, assessment improves teaching and learning. Under STW, the primary purpose of assessment is to measure the difference STW is making in the achievement of students and to improve teaching and learning. Assessments measure the performances of students in achieving the K-12 teaching and learning goals.

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